

SECTION 2.10
WATER POLLUTION CONTROL (SOIL EROSION)

2.10.01--Description: This work shall consist of measures to control water pollution and soil erosion through the use of berms, dikes, dams, sediment basins, erosion control matting, gravel, mulches, grasses, slope drains, ditches, channels, riprap, grading to control surface runoff and other erosion control devices or methods.

If the Contractor proposes changes in construction or his scheduling which would affect the designed pollution controls, he shall submit plans before starting construction for revised pollution controls for the approval of the engineer.

The Contractor shall submit a plan showing erosion and sedimentation controls above and beyond those called for in the plans and/or specifications, necessitated by the proposed sequence of operations and/or construction activities. The construction shall not proceed until the erosion and sedimentation control plans have been approved by the Engineer. The Engineer may order additional control measures if the measures mentioned above prove insufficient.

2.10.02--Materials: The materials shall consist of items conforming to the pertinent articles of the Standard Specifications and approved by the Engineer, or other items approved by the Engineer, such as:

- (a) Soil tackifiers, erosion control matting, burlap, and plastic sheets. All materials shall be clean and free from noxious weeds, contaminants, and debris deleterious to plant growth. Erosion control matting shall conform to Sections 9.50 and M.13.
- (b) Slope drains or ditches may be constructed of pipe, rubble, riprap, sod, burlap, plastic sheets, portland cement concrete, bituminous concrete, or other material approved by the Engineer.
- (c) Seeding shall conform to Sections 9.50 and M.13.

2.10.03--Construction Method: The Engineer has the authority to control the surface area of earth material exposed by construction operations and to direct the Contractor to immediately provide permanent or temporary pollution control measured to prevent contamination of adjacent streams, watercourses, lakes, ponds or other areas of water impoundment. Every effort shall be made by the Contractor to prevent erosion on the site and abutting property.

All slopes shall be stabilized by mulching, seeding or otherwise protected as the work progresses to comply with the intent of this specification.

All seeding shall include mulch or other protective covering approved by the Engineer.

When hay is used as a mulch with seeding, it shall be a minimum of 50 mm deep and held down with a tackifier.

When wood fiber mulch is used, it shall be applied in a water slurry at a rate of 900 kg/4000 m² with or immediately after the application of seed, fertilizer and limestone.

All damaged slopes shall be repaired as soon as possible. The Engineer shall limit the surface area of earth material exposed if the Contractor fails to sufficiently protect the slopes to prevent pollution.

The Contractor shall at all times have on hand the necessary materials and equipment to provide for early slope stabilization and corrective measures to damaged slopes.

Temporary channels, ditches and outfalls shall be protected prior to directing water into them to prevent erosion.

The erosion control features installed by the Contractor shall be maintained by the Contractor, and he shall remove such installations if ordered by the Engineer. Maintenance of erosion control measures by the Contractor shall include the clean-out of accumulated sediment.

The Contractor shall operate all equipment and perform all construction operations so as to minimize pollution. The Contractor shall cease any of his operations which will increase pollution during rain storms.

The Contractor shall give the Engineer sufficient notice of impending shutdowns to enable the Engineer and Contractor to examine the project and to implement erosion and pollution control work.

2.10.04--Method of Measurement: Measurement for payment of work and materials involved with the construction, application and installation of water pollution controls will be as provided for under the applicable contract items.

Temporary slope protection will be measured for payment by the number of square meters of slope protected in accordance with this specification and as directed by the Engineer. When no applicable contract item appears in the proposal for any additional measures not shown on the plans, the additional work and materials required for those measures shall be measured for payment as provided for under Article 1.09.04 - Extra and Cost-Plus Work. All extra work performed on an agreed-price basis shall be incorporated through construction orders and paid for on an item-by-item basis.

The sum of money shown on the estimate and in the itemized proposal as "Estimated Cost" for this work will be considered the price bid even though payment will be made only for actual work performed. The estimated cost figure is not to be altered in any manner by the bidder. Should the bidder alter the amount shown, the altered figures will be disregarded and the original price will be used to determine the total amount bid for the contract.

2.10.05--Basis of Payment: Work will be paid for under the applicable contract items or as provided for under Article 1.09.04 - Extra and Cost-Plus Work. No payment will be made for the clean-out of accumulated sediment for either permanent or temporary erosion control measures.

Temporary control measures that are made necessary by the Contractor's negligence, carelessness, failure to install permanent controls as a part of the work as scheduled and are ordered by the Engineer, or are made necessary by the Contractor's failure to perform the sequence and scheduling of work as part of his schedule as given in the Preconstruction Conference or as later amended and approved, shall be ordered by the Engineer to be accomplished and performed by the Contractor at his own expense.

On areas off the right-of-way that are selected by the Contractor and which include but are not necessarily limited to borrow pits (other than commercially operated sources), Contractor's haul roads, disposal areas, storage, maintenance, batching areas, etc., temporary control work shall be the responsibility of the Contractor and shall be performed by him at his expense in a manner approved by the Engineer. No direct payment will be made for this work; the cost is to be included in other items of the Contract. Temporary control work on the aforesaid areas which are specifically designated for contractual operations by the State shall be paid for under the provisions of this specification.

Temporary slope protection will be paid for at the contract unit price per square meter for "Temporary Slope Protection," which price shall include the installation and removal, where necessary, of the protective material and all equipment, materials, tools and labor incidental thereto.

Pay Item	Pay Unit
Water Pollution Control	Estimated Cost
Temporary Slope Protection	m ²